



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHEAST REGIONAL OFFICE
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March 7, 2007

Mr. Robert Laughton, Chairman
Board of Selectmen, Acting Board of Water
Commissioners
Town of Yarmouth
1146 Route 28
South Yarmouth, MA 02664

RE: Town: YARMOUTH
PWS: Yarmouth Water Department
PWS ID#: 4351000
Permit #: 9P-4-22-351.01
Program: WMA Action: 5 Year Review and
Amended Permit, Transmittal #W079277 and
WM-02 Form Transmittal #060411-1

Dear Mr. Laughton:

Please find attached the following:

- Findings of Fact in Support of the Permit Decision, and
- Water Management Act Permit #9P-4-22-351.01 for the Yarmouth Water Department, Yarmouth, Massachusetts.

If you have any questions regarding the Permit, please contact Duane LeVangie at (617) 292-5706.

Very truly yours,

*This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.*

Richard J. Rondeau, Chief
Drinking Water Program
Bureau of Resource Protection

R/JD/cb

File Name: Y:\DWP Archive\SERO\Yarmouth-4351000-WMA-2007-03-07
Yarmouth Final Permit March 2007

cc: MassDEP-DWP-Boston
Duane LeVangie, MassDEP-WMA Program-Boston
MassDEP SERO Correspondence File
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This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD Service - 1-800-298-2207.

MassDEP on the World Wide Web: <http://www.mass.gov/dep>

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“This document is important and should be translated immediately”.

Spanish

Este documento es importante y se debe traducir inmediatamente.

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Este original é importante e deve ser traduzido imediatamente.

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Questo documento è importante e dovrebbe essere tradotto immediatamente.

Greek

Αυτό το έγγραφο είναι σημαντικό και πρέπει να μεταφραστεί αμέσως.

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Ce document est important et devrait être traduit immédiatement.

Chinese (traditional)

這個文件重要和應該立刻被翻譯。
这个文件重要和应该立刻被翻译。

Communication for Non-English Speaking Parties (310 CMR 1.03(5)(a))

Water Management Act Permit Amendment and Five-Year Review
Water Management Permit 9P-4-22-351.01
Yarmouth Water Department

Yarmouth Water Department Withdrawal History

The Yarmouth Water Department (Yarmouth) currently operates 24 sources of water supply. Twenty-two of these 24 sources are registered under the Water Management Act (WMA). Two of these 24 registered sources, plus 5 newer sources, are permitted under the WMA program of the Massachusetts Department of Environmental Protection (Mass DEP, or, “the Department”). Each of these sources have had approved Zone II’s delineated.

Registered Volume

Since 1985, Yarmouth has been authorized to withdraw, on an average annual basis, up to 3.03 MGD from its 22 registered sources (listed in the next section in Table 2.3-1).

Permitted Volume

The volumes authorized to Yarmouth in its initial permit, issued January 31, 1992, increased incrementally across 4 five-year periods. As of December 1, 2005, Yarmouth has entered its fourth and final permit period. Through November 30, 2010, Yarmouth’s permit authorizes an additional annual average of 1.92 MGD above its registered volume of 3.03 MGD from permitted wells # 13, #14, #17, #18, #19, #23, and #24.

Permit and Registration Expiration Dates

As of January 1, 2008, all WMA registrations in Massachusetts will expire. Permits in the Cape Cod Basin, which is the basin in which Yarmouth’s sources are located, will all expire on November 30, 2010. Please note the footnote to **Table 1: Maximum Authorized Withdrawal Volumes** under **Special Condition 1** of your permit that refers to this fact.

The Water Management Act

The WMA requires that the Department issue permits that balance a variety of factors including:

- Reasonable protection of existing water uses, land values, investments and enterprises;
- Reasonable conservation consistent with efficient water use;
- Reasonable protection of public drinking water supplies, water quality, wastewater treatment capacity, waste assimilation capacity, groundwater recharge areas, navigation, hydropower resources, water-based recreation, wetland habitat, fish and wildlife, agriculture, flood plains; and
- Reasonable economic development and job creation.

To better achieve the balance of competing water uses mandated by the WMA, the Department has adopted the WMA Policy #: BRP/ DWM/DW/P04-1 **“Water Management Policy For Permit and Permit Amendment Applications and 5-Year Review, Effective Date: April 2, 2004”** and the **“Guidance Document for Water Management Act Permitting Policy, Effective Date: January 17, 2006”** (Guidance #BRP/DWM/DW/G05-01). This policy (the Policy) and its guidance document (the Guidance) can be found on the Department’s web site at:

<http://www.mass.gov/dep/brp/wtrm/wtrmregs.htm>.

Five Year Review of Permit Compliance

The Department has completed the 5-year review of the permit in the Cape Cod Basin held by Yarmouth pursuant to the Water Management Act, M.G.L. ch. 21G. This compliance review is conducted to insure that the terms of the permit and the goals of the WMA program are being met.

Permit Amendment Application

In addition, Yarmouth has submitted a completed permit amendment request, BRP Form WM-02, Transmittal # 060411-1, submitted April 12, 2006. The purpose of this application was to amend Yarmouth’s WMA permit to terminate an operational constraint previously incorporated into Special Condition #2 of Yarmouth’s WMA permit. This constraint limited Yarmouth’s maximum day rate for each of their 7 permitted wells to a rate that was less than its approved Zone II rate. This application was accompanied by a previously submitted detailed explanation of the basis for the request to terminate (March 28, 2006 letter from the Yarmouth Water Department to MassDEP).

Findings of Fact: Five Year Review and Permit Amendment

In issuing permits in the Cape Cod Basin, the Department considers the site-specific environmental impacts of individual points of withdrawal, the capacity of individual points, the presence or absence of other users, and the basis for any long-term demand projections. The intent of all permit conditions is to ensure the efficient use of water and mitigate any negative impacts of withdrawals that may occur.

To further the goals of the Water Management program, promote the reasonable and appropriate use of water, and protect the environmental resources of the Commonwealth of Massachusetts, the Department was given the authority to modify permits at any time when it determines that such action is necessary for the promotion of the purposes of the Act, 310 CMR 36.29(2).

After having completed the five-year review and completed the review of permit amendment application Transmittal # 060411-1, the Department hereby issues Yarmouth's 2006 WMA permit (attached).

Basin Performance Standards

The Department's above-referenced Policy and Guidance identify specific "Basin Performance Standards" and Permit Conditions to be applied to new WMA permits and existing WMA permits at either the time they are amended, during 5-year permit review, or at such time as the permit is renewed. The Department has applied these Basin Performance Standards and Permit Conditions in Yarmouth's permit as a result of the completion of its five-year permit review.

As required by MGL c 21G, s 11 and 310 CMR 36.00, the Department makes the following Findings of Fact in support of the following Policy-related permit modifications, and includes herewith its reasons for its Findings.

Standards for the rate of unaccounted-for water (UAW) and for residential gallons per capita day (rgpcd) assigned to WMA permits are designated herein as "Basin Performance Standards". Basin Performance Standards are assigned to WMA permits according to prior determinations of relative stress between those Massachusetts basins with adequate data to support this determination. The methodology utilized to make this determination was established by the Water Resources Commission (WRC) and is documented in its **Stressed Basins Report**, approved December 13, 2001. The map of stressed basins as defined by the WRC can be reviewed at the following link:

<http://www.mass.gov/dep/brp/wtrm/files/stresmap.htm>

In assigning Basin Performance Standards to specific basins or sub basins, the Department also reviews any other pertinent reports, including reports by the United States Geological Survey and the Department's own Watershed Water Quality Assessment Reports.

Basin Performance Standards for the Unassessed Cape Cod Basin

Yarmouth's sources are located in the Cape Cod Basin, which the WRC has identified as an "unassessed basin". The Policy has established the following Basin Performance Standards for all permittees that withdraw water from unassessed basins:

1. Residential per capita water use (RGPCD) of 80 gallons per day or less;
2. Unaccounted for water (UAW) of 15% or less.

The reporting requirements added in the Permit are intended to standardize the information submitted to the Department to assess compliance with the Permit and the Basin Performance Standards. The Permit specifies that Basin Performance Standards be met within two years of the date the permit is issued. Yarmouth currently meets the performance standard for UAW.

However, failure to meet this standard in the future will require implementation of additional water conservation measures, and may result in enforcement by the Department.

The Basin Performance Standards are reasonable standards reflected by the fact that average values in 2005 for Massachusetts were 71 RGPCD, and 11% UAW. Calculating RGPCD in a town such as Yarmouth where population varies greatly with the season is less straightforward. The Department is currently developing a methodology for calculating a true RGPCD in towns with seasonal population variations.

While these Basin Performance Standards represent minimum standards required for compliance with Yarmouth's Permit, the Department believes that the cumulative effect of complying with all the terms and conditions of its Permit will enable Yarmouth to continue to maintain values well within the required parameters.

Five-Year Review Findings of Fact for Specific Permit Conditions

The Department initiated a review of Yarmouth's compliance with the conditions of its permit in an October 26, 2005 letter and Order to Complete (OTC). Yarmouth's responses to this OTC are complete, and have been incorporated into the Department's findings.

Special Condition 1, Maximum Authorized Annual Average Withdrawal Volume combines Yarmouth's registered withdrawal volume of 3.03 MGD with a permitted volume of 1.92 MGD for a total authorized withdrawal of 4.95 MGD through both the third and the fourth, final permit period of the permit. The dates of the third permit period extended from December 1, 2002 through November 30, 2005. The fourth and final permit period began on December 1, 2005, and will end on November 30, 2010. The Department found that, for the period under review, Yarmouth had maintained compliance with its authorized annual average daily volume during the years 2000 through 2005.

Special Condition 2, Maximum Authorized Daily Withdrawals from Each Withdrawal Point, specifies the maximum daily volume expressed in millions of gallons per 24-hour day that may be withdrawn from each of Yarmouth's permitted sources. The maximum authorized daily withdrawal for any of Yarmouth's sources is equal to the approved Zone II rate for that source. In response to Yarmouth's completed and submitted WM-02 application to amend its WMA permit, the Department has terminated that part of Special Condition #2 which had previously placed restrictions on operating Yarmouth's 7 permitted wells. Both the Department and the Yarmouth Water Department have consulted with all known potentially interested parties, including the Yarmouth Conservation Commission, the Yarmouth Board of Health, the Massachusetts Division of Conservation and Recreation (Fish & Wildlife and Endangered Species) and could find no individual or entity who could document the basis for the initial requirement for these operational controls. In addition, removal of these restrictions will enhance operational flexibility and create system redundancy, both of which can have environmental as well as distribution system advantages. Specifically, removal of these

restrictions allows a reduction in the frequency and/ or magnitude of operating any of Yarmouth's registered wells above their approved Zone II rates. For these reasons, the Department has amended Yarmouth's permit to remove these operational controls from Special Condition #2.

Special Condition 3, Zone II Delineations All of Yarmouth's registered and/or permitted sources have had Zone II's delineated. Registered and permitted sources are listed in the following table.

Yarmouth Water Department Sources and Approved Zone II Rates

Well Name	Registered -R and/or Permitted- P	DEP Source ID	Aquifer Type	Zone II Approval Date	Approved Rate (GPM) / (MGD)	
WELL # 1M	R	4351000-01G	Semi-confined	8/16/1993	444	0.64
WELL #1	R	4351000-02G	Semi-confined	3/10/1993	250	0.36
WELL #2	R	4351000-03G	Semi-confined	3/10/1993	245	0.35
WELL #3	R	4351000-04G	Semi-confined	3/10/1993	425	0.61
WELL #4	R	4351000-05G	Semi-confined	8/16/1993	300	0.43
WELL #5	R	4351000-06G	Semi-confined	8/16/1993	300	0.43
WELL #6	R	4351000-07G	Semi-confined	8/16/1993	250	0.36
WELL #7	R	4351000-08G	Semi-confined	8/16/1993	250	0.36
WELL #8	R	4351000-09G	Semi-confined	8/16/1993	250	0.36
WELL #9	R	4351000-10G	Semi-confined	8/16/1993	600	0.86
WELL #10	R	4351000-11G	Semi-confined	8/16/1993	278	0.40
WELL #11	R	4351000-12G	Semi-confined	8/16/1993	278	0.40
WELL #13	R & P	4351000-13G	CONFINED	3/10/1993	333	0.48
WELL #14	R & P	4351000-14G	Semi-confined	3/10/1993	350	0.50
WELL #15	R	4351000-15G	Semi-confined	8/16/1993	444	0.64
WELL #16	R	4351000-16G	Semi-confined	8/16/1993	444	0.64
WELL #17	R & P	4351000-17G	CONFINED	3/10/1993	400	0.58
WELL #18	R & P	4351000-18G	CONFINED	3/10/1993	300	0.43
WELL #19	R & P	4351000-19G	CONFINED	3/10/1993	300	0.43
WELL #20	R	4351000-20G	Semi-confined	3/10/1993	350	0.50
WELL #21	R	4351000-21G	Semi-confined	8/16/1993	444	0.64
WELL #22	R	4351000-22G	Semi-confined	8/16/1993	444	0.64
WELL #23	P	4351000-23G	Semi-confined	3/10/1993	550	0.79
WELL #24	P	4351000-24G	Semi-confined	3/10/1993	350	0.50

At this time, no further delineations are required as a condition of this permit. However, please note that under the New Source Approval process, once a Zone II rate has been assigned for any reason, the system operator is required to operate that source so that its maximum daily rate that does not exceed its approved Zone II rate. If Yarmouth wishes to revisit the basis for the assigned Zone II rate for any of its registered sources and compare these rates to any new or previously-existing aquifer test data that indicates that the aquifer can support a higher Zone II

rate, then Yarmouth may apply for the higher Zone II rate(s) for any of its registered sources that the data supports.

Special Condition 4, Wellhead Protection, requires that Yarmouth amend the Town of Yarmouth's Water Resources Protection Overlay District Map and Bylaws to include all existing wells and any future wells, should any new sources complete the New Source Approval process, are constructed, and are placed on line.

Please note that the following permit conditions, designated as Special Condition 5 and Special Condition 6 in Yarmouth's previously approved permit, are no longer included as conditions of your amended permit (attached). Therefore, re-numbering of subsequent permit conditions has been effected in your amended permit.

- **Terminated: Special Condition 5, Wetlands Monitoring**, This requirement has been successfully completed and is no longer a condition of this permit. Upon reviewing the data and analysis spanning the period 1997 through 2001, the Department finds that the information is sufficient to demonstrate that no adverse impact or significant change has occurred to the wetland plant community, wildlife habitat, or groundwater levels resulting from the withdrawals of the municipal well.
- **Terminated: Special Condition 6, Vernal Pool Monitoring** This requirement has been successfully completed and is no longer a condition of this permit. Upon reviewing the data and analysis spanning the period 1997 through 2001, the Department finds that the information provided is sufficient to demonstrate that no adverse impact or significant change has occurred to the wetland plant community, wildlife habitat, or groundwater levels resulting from the withdrawals of the municipal wells.

Special Condition 5, Performance Standard for Residential Gallons Per Capita Day Water Use
This is a new policy-related permit modification discussed above under "Basin Performance Standards".

Special Condition 6, Performance Standard for Unaccounted for Water This is a new policy-related permit modification, discussed above under "Basin Performance Standards".

Special Condition 7, Water Conservation Requirements, modifies your previous conservation conditions to incorporate the revised Water Conservation Standards for the Commonwealth of Massachusetts, approved by the MA Water Resources Commisison in July 2006.

Special Condition 8, Requirement to Report Raw and Finished Water Volumes, is a new permit condition, and will assure that the information necessary to evaluate compliance with certain other permit conditions is accurately reported.

YARMOUTH-Yarmouth Water Department
WMA Permit #9P-4-22-351.01
PWS ID #4351000

The summary of permit conditions, above, is neither intended nor should be construed as a modification to any of the Permit conditions. In the event of any conflict or ambiguity between the preceding Findings and the permit, the permit language shall control.

WATER WITHDRAWAL PERMIT
MGL c 21G

This permit is issued pursuant to the Massachusetts Water Management Act for the sole purpose of authorizing the withdrawal of a volume of water as stated below and subject to the following special and general conditions. This permit conveys no right in or to any property beyond the right to withdraw the volume of water for which it is issued.

PERMIT NUMBER: 9P-4-22-351.01 **BASIN:** Cape Cod

PERMITTEE: Town of Yarmouth
1146 Route 28
South Yarmouth, MA 02664

EFFECTIVE DATE: January 31, 1992

AMENDMENT DATE: March 7, 2007

EXPIRATION DATE: November 30, 2010

NUMBER OF WITHDRAWAL POINTS:

Groundwater: 7
Surface Water: 0

USE: Public Water Supply

DAYS OF OPERATION: 365 **LOCATIONS: Authorized Withdrawal Points**

Source Name	DEP Source ID Code
Well #13	4351000-13G
Well #14	4351000-14G
Well #17	4351000-17G
Well #18	4351000-18G
Well #19	4351000-19G
Well #23	4351000-23G
Well #24	4351000-24G

SPECIAL CONDITIONS

1. Maximum Authorized Annual Average Withdrawal Volume

This permit authorizes the Town of Yarmouth to withdraw water from the Cape Cod Basin at the rate described below (Table 1). The volume reflected by this rate is in addition to the 3.03 million gallons per day (MGD) previously authorized to the Town of Yarmouth under Water Management Act Registration #42235106 for withdrawal from the Cape Cod Basin. The permitted volume is expressed in millions of gallons, both as an average daily withdrawal rate per year and as a total annual withdrawal volume for each year of the five-year period of the permit term.

The Department of Environmental Protection will use the raw water withdrawal volume from all authorized withdrawal points to assess compliance with the registered and permitted withdrawal volumes.

Table 1: Maximum Authorized Withdrawal Volumes

5-Year Periods		Total Raw Water Withdrawal Volumes			
		Permit		Permit + Registration	
		Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
Period One Years 2-5	2/1/1992- 11/30/1995	1.57	573.05	4.60	1,679.00
Period Two Years 6-10	12/1/1995- 11/30/2000	1.92	700.80	4.95	1,806.75
Period Three Years 11-15	12/1/2000- 11/30/2005	1.92	700.80	4.95	1,806.75
Period Four Years 16-20	12/1/2005- 11/30/2010	1.92	700.80	4.95*	1,806.75*

* Volumes noted are in effect only if no change to registered volumes occurs after the January 1, 2008 date of expiration of all registered volumes in Massachusetts.

2. Maximum Authorized Daily Withdrawals From Each Withdrawal Point

Withdrawals from individual withdrawal points are not to exceed the approved maximum daily volumes listed below (Table 2) without specific advance written approval from the Department. The authorized maximum daily volume is the approved rate of each source. In no event shall the combined withdrawals from the individual withdrawal points exceed the withdrawal volumes authorized above in Special Condition 1.

Table 2: Authorized Maximum Daily Withdrawal Volumes

Well Name	Public Water Supply Source ID Code	Maximum Daily Rate (MGD)
Well #13	4351000-13G	0.48
Well #14	4351000-14G	0.50
Well #17	4351000-17G	0.58
Well #18	4351000-18G	0.43
Well #19	4351000-19G	0.43
Well #23	4351000-23G	0.79
Well #24	4351000-24G	0.50

3. Zone of Contribution Delineations

All 24 of Yarmouth's permitted and/or registered wells have approved Zone II areas developed under the Department's Technical Assistance program. All but four of them (4351000-07G, 4351000-08G, 4351000-09G, and 4351000-10G) have associated Zone II pumping rates.

4. Wellhead Protection

Department records show that Yarmouth has met all land use control requirements contained in 310 CMR 22.21 (2). The Town of Yarmouth's Water Resource Protection Overlay District Map and Bylaws protects each of the Yarmouth Water Department sources, including registered sources not required as a condition of this permit.

5. Performance Standard for Residential Gallons Per Capita Day Water Use

Yarmouth's Performance Standard for Residential Gallons Per Capita Day (RGPCD) is 80 gallons. Yarmouth shall be in compliance with the Performance Standard by December 31, 2009. Yarmouth shall report its RGPCD water use annually in its Annual Statistical Report (ASR) and document compliance with this Performance Standard in its ASR for 2009 and each year thereafter.

Yarmouth shall report its RGPCD and the calculation used to derive that figure as part of its ASR including, without limitation, the source of the data used to establish the service population and the year in which this data was developed. See Appendix A for additional information on the requirements if the Performance Standard for RGPCD is not met.

6. Performance Standard for Unaccounted for Water

Yarmouth's Performance Standard for Unaccounted for Water (UAW) is 15% of overall water withdrawal. Yarmouth shall be in compliance with the Performance Standard by December 31, 2009. Yarmouth shall report its UAW annually in its Annual Statistical Report (ASR) and document compliance with this Performance Standard in its ASR for 2009 and each year thereafter.

Yarmouth shall report its UAW and the calculation used to derive that figure as part of its ASR. UAW is defined as the difference between water pumped or purchased and water that is metered or confidently estimated. UAW shall include, without limitation, water that cannot be accounted for due to meter problems, unauthorized hydrant openings, unavoidable leakage, recoverable leakage, illegal connections, stand pipe overflows, and fire protection where it cannot be confidently estimated. The need for water main flushing and the use of water in construction or meter calibration shall be metered or estimated as appropriate to assist in determining actual demand. Volumes flushed to waste shall be reported on Yarmouth's ASR. See Appendix B for additional information on requirements if the Performance Standard for UAW is not met.

7. Water Conservation Requirements

At a minimum, Yarmouth shall implement conservation measures listed in the following table (Table 5). The Department recognizes that Yarmouth is currently implementing a number of these requirements. Compliance with the water conservation requirements shall be reported to the Department upon request or at the time of Permit Renewal unless otherwise noted below.

Table 5: Minimum Water Conservation Requirements	
System Water Audits and Leak Detection	
<ul style="list-style-type: none"> At a minimum, conduct a full leak detection survey every three years. The first full leak detection survey shall be completed no later than 3 yrs from the date of last documented leak detection survey. 	<ul style="list-style-type: none"> Perform a leak detection survey of the entire distribution system within one year whenever the percentage of unaccounted for water increases by 5% or more (for example an increase from 3% to 8%) over the percentage reported on the ASR for the prior calendar year. Within 60 days of completing the leak detection survey, the permit holder shall submit to the Department for its review a report detailing the leak detection survey, any leaks uncovered as a result of the survey or otherwise, dates of repair and the estimated water savings as a result of the repairs.
	<ul style="list-style-type: none"> Conduct field surveys for leaks and repair programs in accordance with the <u>AWWA Manual 36</u>.
	<ul style="list-style-type: none"> Repair reports shall be kept available for inspection by the Department. The permit holder shall establish a schedule for repairing leaks that is at least as stringent as the following: <ul style="list-style-type: none"> Leaks of 3 gallons per minute or more shall be repaired within 3 months of detection. Leaks of less than 3 gallons per minute at hydrants and appurtenances shall be repaired as soon as possible. Leaks of less than 3 gallons per minute shall be repaired in a timely manner, but in no event more than 6 months from detection, except that leaks in freeway, arterial or collector roadways shall be repaired when other roadwork is being performed on the roadway.

Table 5: Minimum Water Conservation Requirements	
Leaks shall be repaired in accordance with the permit holder's priority schedule including leaks up to the property line, curb stop or service meter, as applicable. The Town shall have water use regulations in place that require property owners to expeditiously repair leaks on their property.	
Metering	
<ul style="list-style-type: none"> Calibrate all source and finished water meters at least annually and report date of calibration on the ASR. 	
<ul style="list-style-type: none"> 100% metering of the system is required. All water distribution system users shall have properly sized service lines and meters that meet AWWA calibration and accuracy performance standards as set forth in <u>AWWA Manual M6 – Water Meters</u>, by the permit renewal date. 	
<ul style="list-style-type: none"> An ongoing program to inspect individual service meters shall be maintained to ensure that all service meters accurately measure the volume of water used by customers. The metering program shall include regular meter maintenance, including testing, calibration, repair, replacement and checks for tampering to identify and correct illegal connections. The plan shall continue to include placement of sufficient funds in the system's annual water budget to calibrate, repair, or replace meters as necessary. 	
Pricing	
<ul style="list-style-type: none"> Establish a water pricing structure that includes the full cost of operating the water supply system by the next permit renewal date. Evaluate rates every three to five years and adjust costs as needed. Full cost pricing factors all costs - operations, maintenance, capital, and indirect costs (environmental impacts, watershed protection) - into prices. 	
<ul style="list-style-type: none"> Decreasing block rates which charge lower prices as water use increases during the billing period, are not allowed by M.G.L. Chapter 40 Section 39L. 	
Residential and Public Sector Conservation	
<ul style="list-style-type: none"> All standards set forth in the Federal Energy Policy Act, 1992 and the Massachusetts Plumbing Code, shall be met. 	
<ul style="list-style-type: none"> Meter or estimate water used by contractors using fire hydrants for pipe flushing and construction. 	
<ul style="list-style-type: none"> Municipal buildings: By January 1, 2008, submit to the Department a status report detailing which municipally owned public buildings in the permit holder's service area have been retrofitted with water saving devices (faucet aerators, low flow shower heads and low flow toilets) and which of those buildings have yet to be retrofitted, along with a schedule to complete the retrofitting by January 1, 2012. 	
<ul style="list-style-type: none"> On or before January 1, 2012, ensure that all municipally owned public buildings in the service area are retrofitted. Note: Municipally owned public buildings that may be scheduled for rehab or demolition after the January 1, 2012 deadline for completing the retrofits, may, with the Department's approval, be exempted from this condition based on the schedule of work. Status report required above should identify those buildings and schedule for repairs/demolition. 	
Industrial and Commercial Water Conservation	
<ul style="list-style-type: none"> Review the use records for industrial, commercial and institutional water users, develop an inventory of the largest water users, and develop and implement an outreach program designed to inform and (where appropriate) work with its largest industrial, commercial and institutional water users on ways to reduce their water use by the next permit review or renewal date. Such outreach plans can include, but are not limited to: information on water audits, meter sizing, water reuse, low-flow plumbing fixtures, mandatory outdoor water use restrictions, suggestions for contacting trade associations for process-specific information on water use reductions, and information on contacting the Executive Office of Environmental Affairs Office of Technical Assistance for Toxics Use Reduction (OTA) which offers a range of assistance and information to help facilities improve water use efficiency and reduce wastewater discharge. OTA can be contacted at (617) 626-1060 or at www.mass.gov/envir/ota 	

Table 5: Minimum Water Conservation Requirements	
<ul style="list-style-type: none"> Upon request by the Department, the permit holder shall report on industrial, commercial and institutional water conservation including the results of its review of water use records for industrial, commercial and institutional water users, the inventory of the largest water users, copies of any outreach materials distributed to industrial, commercial and institutional water users, and to the extent practical, a summary of water use reductions or savings that have resulted. Upon receipt of this report, the Department will take whatever action it deems appropriate to promote the interests of the Water Management Act, including requiring additional actions of the permit holder to reduce industrial, commercial and institutional water use. 	
Lawn and Landscape	
<ol style="list-style-type: none"> Adopt a water use restriction bylaw, ordinance or regulation by May 1, 2008 to provide authority to implement and enforce water use restrictions as necessary. 	
Public Education and Outreach	
<ol style="list-style-type: none"> Develop and implement a Water Conservation Education Plan designed to educate water customers of ways to conserve water. The plan may include the following actions: <ul style="list-style-type: none"> Include in bill stuffers and/or bills, a work sheet to enable customers to track water use and conservation efforts and estimate the dollar savings; Public space advertising/media stories on successes (and failures); Conservation information centers perhaps run jointly with electric or gas company; Speakers for community organizations; Public service announcements; radio/T.V./audio-visual presentations; Joint advertising with hardware stores to promote conservation devices; Use of civic and professional organization resources; Special events such as Conservation Fairs; Develop materials that are targeted to schools with media that appeals to children, including materials on water resource projects and field trips; and make multilingual materials available as needed. 	
<ul style="list-style-type: none"> Upon request of the Department, report on public education and outreach effort, including a summary of activities developed for specific target audiences, any events or activities sponsored to promote water conservation and copies of written materials. 	

8. Requirement to Report Raw and Finished Water Volumes

Yarmouth shall report annually on its ASR the raw water volumes and finished water volumes for the entire water system. Raw water volumes for individual water withdrawal points shall be reported in the ASR.

GENERAL CONDITIONS (applicable to all permittees)

1. **Duty to Comply** The permittee shall comply at all times with the terms and conditions of this permit, the Act and all applicable State and Federal statutes and regulations.
2. **Operation and Maintenance** The permittee shall at all times properly operate and maintain all facilities and equipment installed or used to withdraw up to the authorized volume so as not to impair the purposes and interests of the Act.
3. **Entry and Inspections** The permittee or the permittee's agent shall allow personnel or authorized agents or employees of the Department to enter and examine any property for the purpose of determining compliance with this permit, the Act or the regulations published pursuant thereto, upon presentation of proper identification and an oral statement of purpose.
4. **Water Emergency** Withdrawal volumes authorized by this permit are subject to restriction in any water emergency declared by the Department pursuant to MGL c 21G ss 15-17, MGL c 150 ss 111, or any other enabling authority.
5. **Transfer of Permits** This permit shall not be transferred in whole or in part unless and until the Department approves such transfer in writing, pursuant to a transfer application on forms provided by the Department requesting such approval and received by the Department at least thirty (30) days before the effective date of the proposed transfer. No transfer application shall be deemed filed unless it is accompanied by the applicable transfer fee established by 310 CMR 36.37.
6. **Duty to Report** The permittee shall submit annually, on a form provided by the Department, a certified statement of the withdrawal, such report to be received by the Department by January 31st of each year. Such report must be mailed or hand delivered to:

Department of Environmental Protection
Drinking Water Program
Water Management Program
One Winter Street
Boston, MA 02108

7. **Duty to Maintain Records** The permittee shall be responsible for maintaining monthly withdrawal records.
8. **Metering** All withdrawal points included within the permit shall be metered. Meters are to be calibrated annually.

APPEAL RIGHTS AND TIME LIMITS

This permit is a decision of the Department. Any person aggrieved by this decision may request an adjudicatory hearing. Any such request must be made in writing, by certified mail and received by the Department within twenty-one (21) days of the date of receipt of this permit. No request for an appeal of this permit shall be validly filed unless a copy of the request is sent by certified mail, or delivered by hand to the local water resources management official in the city or town in which the withdrawal point is located; and for any person appealing this decision, who is not the applicant, unless such person notifies the permit applicant of the appeal in writing by certified mail or by hand within five (5) days of mailing the appeal to the Department.

CONTENTS OF HEARING REQUEST

310 CMR 1.01(6)(b) requires the request to include a clear and concise statement of the facts which are the grounds for the request and the relief sought. In addition, the request must include a statement of the reasons why the decision of the Department is not consistent with applicable rules and regulations, and for any person appealing this decision who is not the applicant, a clear and concise statement of how that person is aggrieved by the issuance of this permit.

FILING FEE AND ADDRESS

The hearing request, together with a valid check, payable to the Commonwealth of Massachusetts in the amount of \$100 must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, Ma. 02211

The request shall be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

EXEMPTIONS

The filing fee is not required if the appellant is a city or town (or municipal agency), county, district of the Commonwealth of Massachusetts, or a municipal housing authority.

WAIVER

The Department may waive the adjudicatory hearing filing fee for any person who demonstrates to the satisfaction of the Department that the fee will create an undue financial hardship. A person, seeking a waiver must file, together with the hearing request, an affidavit setting forth the facts which support the claim of undue hardship.

YARMOUTH-Yarmouth Water Department
WMA Permit #9P-4-22-351.01
PWS ID #4351000

NO WITHDRAWAL IN EXCESS OF 100,000 GALLONS PER DAY OVER THE REGISTERED VOLUME (if any) SHALL BE MADE FOLLOWING THE EXPIRATION OF THIS PERMIT, UNLESS BEFORE THAT DATE THE DEPARTMENT HAS RECEIVED A RENEWAL PERMIT APPLICATION PURSUANT TO 310 CMR 36.00.

Appendix A – Residential Gallons Per Capita Day

I. Compliance Plan Requirement

If Yarmouth fails to document compliance with the RGPCD Performance Standard in its 2009 ASR, or in any ASR thereafter, then Yarmouth must file with that ASR a Residential Gallons Per Capita Day Compliance Plan (RGPCD Plan) which shall:

- a. meet the requirement set forth below in Section II;
- b. include measures to be implemented to meet the Performance Standard; and
- c. include the schedule for implementing such measures.

The filing of a RGPCD Plan shall not constitute a return to compliance, nor shall it affect the Department's authority to take action in response to Yarmouth's failure to meet the Performance Standard.

If a RGPCD Plan is required, Yarmouth must:

- a. submit information and supporting documentation sufficient to demonstrate compliance with its RGPCD Plan annually at the time it files its ASR; and
- b. continue to implement the RGPCD Plan until it complies with the Performance Standard and such compliance is documented in Yarmouth's ASR for the calendar year in which the standard is met.

II. Contents of a Residential Gallons Per Capita Day Compliance Plan

At a minimum, all RGPCD Compliance Plans must include a detailed:

- a. description of the actions taken during the prior calendar year to meet the Performance Standard;
- b. analysis of the cause of the failure to meet the Performance Standard;
- c. description and schedule of the actions that will be taken to meet the Performance Standard; and
- d. analysis of how the actions described in c. will address the specific circumstances that resulted in the failure to meet the Performance Standard.

RGPCD Plans may be amended to revise the actions that will be taken to meet the Performance Standard. Amended RGPCD Plans must include the information set forth in paragraph above.

At a minimum, all RGPCD Plans for failure to meet the RGPCD Performance Standard must include implementation of at least one of the following residential conservation programs:

- a. a program that provides water saving devices such as faucet aerators and low flow shower heads at cost;
- b. a program that provides rebates or other incentives for the purchase of low water use appliances (washing machines, dishwashers, and toilets); or
- c. the adoption and enforcement of an ordinance, bylaw or regulation to require the installation of moisture sensors or similar climate related control technology on all automatic irrigation systems.

If Yarmouth is already implementing one or more of these programs, it must include in its RGPCD Plan the continued implementation of such program(s), as well as implementation of at least one additional program. All programs must include a public information component designed to inform customers of the program and to encourage participation in the program.

Without limitation, RGPCD Plans for failure to meet the RGPCD Performance Standard may include the following actions in addition to those outlined in the paragraph above:

- a. the use of an increasing block water rate or a seasonal water rate structure as a tool to encourage water conservation;
- b. a program that provides rebates or other incentives for the installation of moisture sensors or similar climate related control technology on automatic irrigation systems;
- c. the adoption and enforcement of an ordinance, bylaw or regulation to require that all new construction include water saving devices and low water use appliances;
- d. the adoption and enforcement of an ordinance, bylaw or regulation to require that all new construction minimize lawn area and/or irrigated lawn area, maximize the use of drought resistant landscaping, and maximize the use of top soil with a high water retention rate;
- e. the implementation of a program to encourage the use of cisterns or rain barrels for outside watering; and
- f. the implementation of monthly or quarterly billing.

Appendix B – Unaccounted for Water

I. Compliance Plan Requirement

If Yarmouth fails to document compliance with the UAW Performance Standard in its 2009 ASR, or in any ASR thereafter, then Yarmouth must file with that ASR an Unaccounted for Water Compliance Plan (UAW Plan) which shall:

- a. meet the requirements set forth below in Section II;
- b. include measures to be implemented to meet the Performance Standard; and
- c. include the schedule for implementing such measures.

The filing of a UAW Plan shall not constitute a return to compliance, nor shall it affect the Department's authority to take action in response to Yarmouth's failure to meet the Performance Standard.

If a UAW Plan is required, Yarmouth must:

- a. submit information and supporting documentation sufficient to demonstrate compliance with its UAW Plan annually at the time it files its ASR; and
- b. continue to implement the UAW Plan until it complies with the Performance Standard and such compliance is documented in Yarmouth's ASR for the calendar year in which the standard is met.

II. Contents of an Unaccounted for Water Compliance Plan

Yarmouth has the choice to file a UAW Plan with measures tailored to the specific needs of its water supply system (Individualized UAW Plan) or a UAW Plan that includes Best Management Practices (BMP UAW Plan).

At a minimum, all UAW Plans must include a detailed:

- a. description of the actions taken during the prior calendar year to meet the applicable Performance Standard;
- b. analysis of the cause of the failure to meet the Performance Standard;
- c. description and schedule of the actions that will be taken to meet the Performance Standard; and
- d. analysis of how the actions described in c. will address the specific circumstances that resulted in the failure to meet the Performance Standard.

UAW Plans may be amended to revise the actions that will be taken to meet the Performance Standard. Amended UAW Plans must include the information set forth in the paragraph above.

Individualized UAW Compliance Plan

Without limitation, Individualized UAW Compliance Plans for failure to meet the UAW Performance Standard may include any of the actions set forth in the BMP UAW Compliance Plan below.

BMP UAW Compliance Plan

At a minimum, all BMP UAW Plans for failure to meet the UAW Performance Standard must include all of the following actions:

- a. within one year of filing the UAW Plan, complete a water audit and leak detection survey of the entire system and submit completed audit and survey to the Department;
within one year of completing the audit and leak detection survey, conduct sufficient repairs to reduce by 75% (by water volume) all leaks detected in the survey; and
within one year of completing such repairs, conduct additional repairs of leaks detected in the survey as may be necessary to reduce permittee's UAW to 10% or less;
- b. implementation of a program that ensures the inspection and evaluation of all water meters and, as appropriate, the repair, replacement and calibration of water meters in accordance with the following schedule:
 - Large Meters (2" or greater) - within one year of filing the BMP UAW Plan
 - Medium Meters (1" or greater and less than 2") - within two years of filing the BMP UAW Plan
 - Small Meters (less than 1") –within three years of filing the BMP UAW Plan;
- c. implementation of monthly or quarterly billing within three years of filing the BMP UAW Plan; and
- d. within one year of filing the UAW Plan, implementation of a water pricing structure that achieves sufficient revenues to pay the full cost of operating the system including, without limitation, the costs of repairs under paragraph a., the costs of meter repairs, replacements and calibrations under paragraph b., the costs of employees and equipment, and ongoing maintenance and capital costs.